Asia-Pacific Security Studies

Challenges to Transforming Asian-Pacific Militaries

Key Findings

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Despite considerable debate as to the value and effectiveness of the information technology (IT)-led revolution in military affairs (RMA), most Asia-Pacific countries have made little progress in actually transforming their militaries, particularly when it comes to implementing organizational, institutional, and doctrinal changes.

Modernization-Plus is perhaps a more apt descriptor of what is currently transpiring in most Asia-Pacific militaries. While many militaries in the region are certainly acquiring capabilities that they did not possess earlier--such as new capacities for force projection and standoff attack, low-observability, and greatly improved command, control, communications, computing, intelligence, surveillance, and reconnaissance (C4ISR)--this effort is, in general, evolutionary, steady-state, and incremental. Therefore, it is not so much a disruptive as it is a sustaining process of innovation.

Several factors currently impede defense transformation among Asia-Pacific militaries including budgetary constraints; cultural, organizational, and bureaucratic resistance; the effect of legacy systems and preexisting procurement commitments; weaknesses in national defense technology and industrial bases; and the under-appreciated complexity of spinning-on commercial dual-use technologies. Overall, defense transformation may simply be too disruptive and too threatening to military and civilian elites, too expensive, and technologically too demanding.

Modernization-plus may be sufficient to meet these countries' future defense requirements, however. Simply creating a more capable C4ISR infrastructure could greatly enhance these militaries' fighting effectiveness and produce at least some measure of improved interoperability with U.S. forces.

On the other hand, settling for modernization-plus could mean that Asia-Pacific militaries will fail to take advantage of the potential synergies and effectiveness contained in all the advanced systems they are currently acquiring. In particular, failing to keep pace with U.S. transformation could translate into a widening capabilities gap with adverse implications for future coalition operations.

Despite considerable discussion, debate, and evaluation regarding the value and effectiveness of the IT-led RMA (see Richard A. Bitzinger, "Defense Transformation and the Asia-Pacific: Implications for Regional Militaries," Asia-Pacific Center for Security Studies, October 2004), most Asia-Pacific countries have made little progress in actually transforming their militaries. In particular, there has been little progress in implementing the organizational, institutional, and doctrinal changes in their armed forces. Few militaries in the region have moved beyond the initial speculation phase of defense transformation, and even fewer are experimenting with new organizations and methods of warfare or specifically developing a strategy of transforming their armed forces and directing resources toward this end. Even then, no country in the region has yet revised its doctrine or fielded reorganized force structures in line with transformational concepts of the IT-led RMA. In some countries--particularly India, Japan, and South Korea--the debate is still rather thin and extremely theoretical, and any tangible movement toward transformation would appear to be far on the horizon.

Even China, whose efforts to exploit the emerging RMA are perhaps the most focused of any country in the region, still has a long way to go in terms of defense transformation and acquiring and applying state-of-the-art weapons systems in terms of transformational technologies. Certainly, the People's Liberation Army (PLA) has made considerable progress over the past decade in adding new weapons to its arsenal, and China has noticeably improved its military capabilities in several specific areas, particularly missile attack, air and naval platforms, and information warfare. At the same time, however, the PLA continues to suffer from considerable deficiencies and weaknesses that limit its ability to constitute a modern, transformed military force, and the pace of reform and change has been slow. The PLA remains an overwhelmingly ground-based army comprised largely of infantry and oriented toward a linear, attrition People's War. Much of its weaponry is still of 1960s- and 1970s-era vintage, and the PLA still lacks the logistical and lift capacity (both by sea and air) to project force considerably beyond its borders. Finally, China's capabilities in the areas of information warfare and C4ISR architectures are still very much at the early stages of research and development (R&D) and deployment.

Ultimately, defense transformation does not adequately describe current efforts by Asia-Pacific nations to upgrade and reform their militaries. If defense transformation entails a fundamental change in the concept, character, and conduct of war fighting, then most Asia-Pacific nations are not so much engaged in transforming their armed forces as they are in modernizing it. Modernization-plus is a more apt descriptor of what is currently transpiring in most Asia-Pacific militaries. Many militaries in the region are in the process of buying new military equipment including precision-guided munitions, airborne early warning aircraft, submarines, air-to-air refueling aircraft, datalinks, and improved command and control systems. They are certainly acquiring capabilities that they did not possess earlier, such as new capacities for force projection and standoff attack, low-observability, and greatly improved C4ISR. However, this modernization effort is, in general, evolutionary, steady-state, and incremental, and it is therefore not so much a disruptive as it is a sustaining process of innovation.

Impediments to Defense Transformation in the Asia-Pacific

Several factors currently inhibit defense transformation among the Asia-Pacific militaries. The first of these impediments is, quite simply, cost and resource constraints: Transformation, it turns out, doesn't come cheap, despite assertions made early on by some proponents of the IT-led RMA that the exploitation of commercial off-the-shelf (COTS) technologies would greatly reduce costs. Rather, it requires the acquisition of many new and expensive types of military-unique systems, such as precision-guided weapons, strategic lift, and low-observable technologies. Even many dual-use COTS information and communications technologies are not easily (or cheaply) adapted to military use, as they often require substantial modification (such as ruggedization or additional capabilities).

At the same time, funding for transformational systems must generally compete with large and expensive legacy programs such as fighter aircraft, tanks, and large surface combatants, as well as huge manpower costs usually associated with sizable ground forces. In fact, in the case of most Asia-Pacific militaries, such legacy spending continues to siphon off monies that could be utilized to pay for transformational systems.

Ironically, defense transformation is lagging in the Asia-Pacific despite the fact that most countries in the region have actually increased defense spending over the past decade. Military expenditures in the Asia-Pacific market grew by nearly 27 percent in real terms over the past decade, and an extra $126 billion was added to regional defense budgets between 1992 and 2002. Nevertheless, even these rising military expenditures may not be sufficient to fund both legacy and transformational systems or to acquire new systems in sufficient quantities so as to be transformational in their effects. Many Asia-Pacific countries, such as India and South Korea, still spend less than $15 billion on defense, and most--including Australia, Singapore, and Taiwan--spend less than $10 billion. In the case of Japan, perhaps the only country in the region with the indigenous technological and industrial capabilities for exploiting the IT-based RMA, defense budgets have been stagnant for years. Only China has been able to maintain substantial and sustained increases in military spending over the past decade.

In some cases, expenditures for force recapitalization are expected to rise over the next few years. South Korea, for example, plans to invest more than $17 billion in modernizing its armed forces over the 2003-7 timeframe. Taiwan intends to spend an additional $18 billion over the next decade on new military equipment, including eight diesel-electric submarines and an antiballistic missile system. It is probably too soon to tell, however, how much of these extra monies will go for underwriting transformation.

Second, the organizational and institutional cultures generally found in most Asia-Pacific militaries are also impeding transformation. Militaries in the Asia-Pacific are often extremely conservative, risk-averse, and highly routinized organizations. Of course, most large organizations such as corporations and government bureaucracies are typically resistant to change, especially disruptive change since these may threaten the stability of day-to-day operations, standard operating procedures (such as war plans), and even career paths. Militaries, however, are especially hierarchical with heavy top-down command and control structures. In the Asia-Pacific region, the conservative and hierarchical nature of military organizations is often compounded by Confucian principles of harmony, deference to superiors, respect for elders (i.e., age is often synonymous with rank or leadership), and concerns over loss of face. Consequently, local militaries may be resistant or even hostile to the disruptive, leveling, and decentralizing nature of transformation and the IT-based RMA.

In many cases, too, this conservative thinking and risk-averse behavior are exacerbated by the pattern of old boys networks in defense decision-making. Many critical decisions and policies pertaining to national security are made by small, insular groups of individuals drawn from a common pool of military offi-

cers, career civilian defense officials, defense industry representatives, and private advisers, many of whom are ex-military or former bureaucrats. This process, which is often coupled with attendant corruption and bribery, reinforces a business-as-usual approach and limits linkages to centers of innovation in the commercial and business worlds that, in turn, make it harder to implement transformation.

Another consequence of this decidedly conservative nature on the part of regional defense establishments is a continuing preference for traditional over transformational systems. Local militaries often prize highly visible large-item weapons platforms--such as main battle tanks, modern fighter aircraft, and even aircraft carriers--over less-sexy transformational systems such as unmanned aerial vehicles (UAVs), C4ISR networks, and precision-guided munitions. In addition, ground forces are still quite often the predominant service in many Asia-Pacific militaries (this is particularly evident in China, India, South Korea, and Taiwan) with a corresponding penchant for mechanized armor, large ground forces, and force-on-force warfare.

Many militaries in the region also lack any tradition of joint operations and instead possess strong single-service cultures and considerable interservice rivalries. This makes it doubly difficult to introduce the idea of jointness, interoperability, and combined-arms operations (as basic war fighting concepts) and to create common C4ISR and logistical support systems.

Third, most defense technology and industrial bases in the Asia-Pacific region are ill equipped to contribute much to defense transformation. Most regional defense R&D and industrial bases, even in Japan, lack the necessary design skills, technological expertise, or links to advanced commercial technology sectors (particularly local IT industries) in order to develop and manufacture transformational systems. In particular, these countries' defense industries do not possess sufficiently advanced systems integration capabilities to link highly complex systems-of-systems such as C4ISR networks. Most of these firms are simply not set up to function as lead systems integrators that are capable of building and leading large teams of disparate subcontractors to design, develop, and manufacture a system to customer specifications. Rather, most defense industries in the region are still primarily metal-bashers as opposed to innovators, and most local arms manufacturing consists of the licensed production of U.S. or European weapons systems or the production of relatively simple indigenous systems such as artillery pieces or small arms.

In addition, the heavy emphasis in most of these countries on self-reliance in arms production means that resources are often wasted on duplicating the development and manufacture of weapons systems already widely available on the global arms market. Local arms manufacturers tend to push their governments to buy those systems that they are already capable of producing or which offer prestige and global presence (again, mostly legacy systems, such as fighter aircraft or large surface combatants) rather than transformational systems.

When countries do choose to acquire transformational systems, particularly advanced precision-guided weapons and C4ISR networks, they will likely have to buy them COTS from foreign suppliers or develop them collaboratively with foreign partners. However, these programs will have to compete with locally built systems supported by strong political lobbies whose focus is preservation of jobs and strategic industries.

Fourth, militaries and defense industries in the Asia-Pacific region have few strong linkages to innovative local industries such as the IT sector, limiting the potential for commercial-military spin-on. Most regional arms industries are state-owned and generally segregated from both market forces and the private sector. This demarcation, however, makes it more difficult for the defense sector to benefit from cross-fertilization with commercial technologies. It also makes it harder and less of an incentive for civilian industries to participate in military R&D and manufacturing. At the same time, local militaries in general remain distrustful of COTS technologies and still prefer military specification equipment.

Fifth, the capabilities of local commercial high-technology industries, particularly local IT industries, may actually be overrated and therefore of little use in contributing to defense transformation. While many Asia-Pacific countries boast sizable IT sectors, the emphasis has largely been on production engineering and not on innovative R&D. Most countries in the region are still weak when it comes to their science and technology bases and, as with local arms manufacturing, they particularly lack the necessary systems integration skills to adapt and incorporate commercial technologies in military systems. With the exception of Japan, most regional IT production has been decidedly low-tech. Most of Taiwan and China's IT industries are still oriented toward production and assembly according to original equipment manufacturer (OEM) specifications, for example, rather than indigenous design and manufacturing. Huawei and ZTE, two of China's much-vaunted telecommunications vendors (the former of which has indirect ties to the PLA), have basically prospered by occupying the relatively low-end of the telecoms sector-producing basic systems, keeping prices and production costs low, and selling to the developing world. Even India's highly vaunted software industry is still largely geared toward delivering highly specialized programs according to strict customer specifications or doing the grunt work of the global IT industry (such as debugging Y2K software or handling technical support calls).

Consequently, the exploitation of dual-use technologies for defense transformation is unlikely to occur to any large degree. While nearly all countries in the Asia-Pacific region agree with the great promise of advanced commercial technologies for military uses, particularly when it comes to IT or outer space, few in fact have made a deliberate and concerted effort to engage in such spin-on. Most exploitation of dual-use technologies in the region has so far been serendipitous and modular, i.e., piggybacking on existing or emerging commercial systems (such as nationwide fiber-optic telecommunications networks) rather than adapting commercial technologies to military purposes. Even then, dual-use efforts have not always translated into success as evidenced by Japan's recent setbacks in its space program.

Conclusion

At this time, it may be premature or even irrelevant to talk about defense transformation in the context of the Asia-Pacific militaries. Most countries in the region, despite their best efforts, are unlikely to transform their militaries to the extent made possible by the information revolution and the emerging RMA, at least not anytime soon. Too many factors hinder or impede the ability of even the most technologically advanced or motivated militaries in the Asia-Pacific to move beyond modernization-plus. These include budgetary constraints; cultural, organizational, and bureaucratic resistance; the effect of legacy systems and preexisting procurement commitments; weaknesses in national defense technology and industrial bases; and the underappreciated complexity of spinning-on commercial dual-use technologies. Overall, defense transformation may simply be too disruptive and too threatening to military and civilian elites, too expensive, and technologically too demanding.

It is easy to criticize the slow progress or resistance on the part of the Asia-Pacific militaries when it comes to transformation. Change (especially radical change inherent in the RMA) is always hard, and it is human nature to be suspicious and hostile

toward the unknown. Therefore, it should not be surprising to see so much organizational, institutional, and cultural resistance to the idea of transformation. Even in the United States and Europe, there still exists considerable skepticism and foot-dragging when it comes to defense transformation. Moreover, transformation as a concept suffers from the fact that it is basically an open-ended, continuous process. Since there will always be new technological innovations that can affect the character and conduct of warfare (and therefore military doctrine and organization) where is the end-game? When does a military decide that it has finally, successfully transformed itself? In fact, it never can and to fault a country for being at only a certain level of transformational capabilities or for making only a certain degree of progress toward implementing an RMA is perhaps unfair.

As Emily Goldman, leading analyst of the RMA in the Asia-Pacific, succinctly notes, "Hardware may easily be acquired but the accompanying software (e.g., doctrine, tactics, organizational form, and macro-social change) [of defense transformation] is far more difficult to develop and implement." At the same time, transformation along the lines of the U.S. model may not be necessary to get the job done. Despite the fact that few Asia-Pacific militaries are likely to implement a full-scale RMA, a modernization-plus strategy--that is, evolutionary and sustaining innovation--may be sufficient to meet most of these countries' defense requirements particularly with respect to their strategic context (immediate threat perceptions and defense requirements) and their available resources. These countries do not need to emulate the U.S. transformation paradigm in order to derive considerable new capabilities and benefits from their current modernization efforts; a partial solution, if not revolutionary, could be more than adequate. In particular, just overlaying a more capable C4ISR infrastructure onto existing forces could greatly improve these militaries' fighting effectiveness.

In addition, when it comes to U.S. friends and allies in the region, it may be enough to modernize just to be more interoperable with U.S. forces and fill an important niche in coalition operations, rather than attempt to acquire a complete set of transformational systems. For example, it would be mutually beneficial for these countries to cooperate with the United States on missile defenses, such as establishing joint capabilities for early warning and cooperative engagement, in order to bring both U.S. forces and friendly nations under a single defensive shield. In addition, missile defenses, particularly if implemented collaboratively, could be a critical catalyst in promoting the development and deployment of advanced (and common) C4ISR infrastructures.

Finally, it is often argued that there is not a "one-size-fits-all" RMA, but rather there are many roads to transforming a country's military. China in particular appears to be on its own path toward "sinofying" the RMA, based primarily on missile strikes and information (i.e., "hacker") warfare. If successful--and this may only be verified through military conflict, for example, in a war against Taiwan--then China's military could constitute a rival model for transforming one's armed forces.

On the other hand, if Asia-Pacific nations--especially friends and allies of the United States--do not transform sufficiently according to a "general model" of the RMA, they may be unable to enjoy the full benefits of modernization. Settling for modernization-plus could mean that these countries will fail to take advantage of the potential synergies and effectiveness contained in the advanced systems they are currently acquiring. Such a development could have several negative effects or unintended consequences. For instance, if a country does not transform its forces, what recourse does it have against potential adversaries who do? It might pursue offsetting asymmetric responses, such as acquiring WMD capabilities (nuclear, biological, or chemical weapons along with their attendant delivery systems) or adopting low-intensity insurgency and guerilla tactics. In either case, this could result in new threats undermining regional stability. In addition, U.S. allies and friendly countries could still be greatly limited when it comes to participating in joint operations with the United States or interoperating with U.S. military forces. Many of these countries (along with America's allies in Europe) are already worried about a growing capabilities gap with U.S. forces and how this might affect future joint operations that, in turn, could directly affect their national security. The failure to keep pace with U.S. transformation could mean that this gap will only widen, or that these countries could be relegated to a tool box status, playing only minor roles in any coalition operations.

The issue of defense transformation in the Asia-Pacific region will likely remain a legitimate subject for discussion and debate for some time to come. In particular, it will be increasingly linked to a number of already critical regional security concerns including alliance relationships and interoperability, regional competition and cooperation, arms sales and procurement, civil-military relations, internal security and stability, and the impact of technology and economic development. Despite the many challenges of implementation, the enormous potential and promise of transformation will continue to drive regional militaries to explore and experiment with concepts of the emerging RMA.

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